

WHAT IS CLAIMED IS

1. An image forming apparatus comprising:

a first chamber including a first mixer and
configured to convey a developer containing at least
5 toner in a first direction while stirring the developer
and supply the toner to an image carrier;

a second chamber including a second mixer and
configured to convey at least the developer supplied
from the first chamber in a second direction different
10 from the first direction while stirring the developer;

a third chamber including a third mixer and
configured to convey at least the developer supplied
from the first chamber in the second direction while
stirring the developer;

15 a fresh toner supply portion located on an
upstream side of the second chamber and configured to
receive fresh toner; and

a recycle toner supply portion located on an
upstream side of the third chamber and configured to
20 receive recycle toner collected from a surface of the
image carrier.

2. The image forming apparatus according to
claim 1, wherein a downstream side of the first chamber
is connected to a first communicating portion located
25 on an upstream side of the second chamber and a second
communicating portion located on an upstream side of
the third chamber.

3. The image forming apparatus according to claim 2, wherein the first communicating portion is separated from the second communicating portion.

5 4. The image forming apparatus according to claim 3, wherein the fresh toner supply portion is located on a downstream side of the first communicating portion.

5. The image forming apparatus according to claim 1, further comprising:

10 a first conveying path including the first chamber and the second chamber, the second mixer conveying the developer containing the fresh toner at the first speed; and

15 a second conveying path including the first chamber and the third chamber, the third mixer conveying the developer containing the recycle toner at the second speed which is slower than the first speed.

20 6. The image forming apparatus according to claim 5, wherein the second speed is one third of the first speed.

7. The image forming apparatus according to claim 5, wherein the second conveying path is longer than the first conveying path in length.

25 8. A toner stirring method comprising:
supplying recycle toner collected from a surface of an image carrier to a recycle toner supply portion;
conveying the supplied recycle toner to a merging

portion at a first speed while stirring, thereby
charging to have a predetermined potential;

conveying refresh toner supplied to a fresh toner
supply portion at a predetermined timing to the merging
5 portion at a second speed which is slower than the
first speed while stirring, thereby charging to have
a predetermined potential; and

supplying the recycle toner and the fresh toner
that have been conveyed to the merging portion to the
10 surface of the image carrier.

9. The toner stirring method according to
claim 8, the first speed is one third of the second
speed.